



Small Volume Agent

小容量剂

让世界制药工业插上智慧的翅膀

Equip global pharmaceutical manufacturing industry with intelligent wings.





<p>AQCL 系列安瓿立式超声波清洗机 - 06 - AQCL Series Vertical Ultrasonic Washing Machine</p> <p>KSZ 系列隧道式灭菌干燥机 - 08 - KSZ Series Sterilizing & Drying Tunnel</p> <p>AGFHL 系列安瓿灌封机 - 10 - AGFHL Series Ampoule Filling & Sealing Machine</p> <p>AGFH 系列安瓿灌封机 - 12 - AGFH Series Ampoule Filling & Sealing Machine</p> <p>KQCL 系列西林瓶立式超声波清洗机 - 16 - KQCL Series Vertical Ultrasoni Washing Machine</p> <p>KSZ 系列隧道式灭菌干燥机 - 18 - KSZ Series Sterilizing & Drying Tunnel</p> <p>KGSA12、KGSA6 系列西林瓶灌装加塞机 - 20 - KGSA12\KGSA6 Series Linear Filling & Plugging Machine</p> <p>KGSA12/16 系列西林瓶灌装加塞机 - 22 - KGSA12/16 Series L Shape Filling & Plugging Machine</p> <p>ZG 系列西林瓶轧盖机 - 24 - ZG Series Capping Machine</p> <p>KFGC 系列西林瓶螺杆分装机 - 27 - KFGC Series Powder Auger Filling & Plugging Machin</p> <p>KFGL 系列西林瓶螺杆分装机 - 29 - KFGL Series Powder Auger Filling & Plugging Machine</p> <p>插管式粉末分装机 - 31 - Intubation Powder Packager</p> <p>YQCL 系列口服液瓶立式超声波清洗机 - 35 - YQCL Series Vertical Ultrasonic Washing Machine</p> <p>KSZ 系列隧道式灭菌干燥机 - 37 - KSZ Series Sterilizing & Drying Tunnel</p> <p>YGZ16/25 型口服液瓶灌轧机 - 39 - YGZ16/25 Oral Liquid Bottle Filling & Filling Machine</p> <p>YGZ15/16 型口服液瓶灌轧机 - 41 - YGZ15/16 Oral Liquid Bottle Filling & Capping Machine</p>	<p>ALXL 系列 L 型安瓿洗烘灌封联动线 - 01 - ALXL Series L Shape Ampoule Compact Line For Washing, Sterilizing&Drying, Filling&Sealing</p> <p>ALX 系列直线型安瓿洗烘灌封联动线 - 04 - ALX Series Linear Shape Ampoule Compact Line For Washing, Sterilizing & Drying, Filling & Sealing</p> <p>KLX 系列西林瓶洗烘灌封联动线 - 14 - KLX Series Linear Shape Vial (Liquid) Compact Line For Washing, Sterilizing & Drying, Filling & Plugging, Sealing</p> <p>KLXF 系列西林瓶粉针分装洗烘灌封联动线 - 26 - KLXF Series Vial (Powder) Compact Line For Washing, Sterilizing & Drying, Filling & Plugging, Sealing</p> <p>YLX 系列口服液瓶洗烘灌封联动线 - 33 - YLX Series Oral Liquid Compact Line For Washing, Sterilizing & Drying, Filling & Sealing</p> <p>PFS 系列预灌封生产系统 - 43 - PFS Pre-Filling & Sealing Compact Line</p>
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楚天科技股份有限公司成立于 2000 年，现已成为世界医药装备行业的主要企业之一。主营业务系医药装备及其整体技术解决方案，并率先推动智慧医药工厂的研究与开发。公司系中国 A 股上市公司。旗下拥有德国 ROMACO 集团、楚天华通、四川医药设计院、楚天飞云、楚天源创、楚天华兴、楚天智能机器人等多家全资或控股子公司，全球员工总数 4500 人，总资产近 50 亿元。

公司已有长沙和德国两大运营总部，建有长沙中央技术研究院、欧洲技术研究院和四川医药设计研究院三大研发机构。设有国家级企业技术中心，国家级创新基地，博士后科研工作站，院士专家工作站等多个技术与创新平台。截止 2021 年 3 月 31 日，共提出 3521 项中国专利申请，授权专利 2094 项。另提出 35 件 PCT 国际专利申请，在美国、俄罗斯、印度、韩国、德国、印尼、欧洲等多国获得 19 项专利授权。另提出 35 件 PCT 国际专利申请，在美国、俄罗斯、印度、韩国、德国、印尼、欧洲等多国获得 19 项专利授权。牵头制订了本系统国家行业产品技术标准 17 项。楚天本部产品已出口到亚洲、欧洲、南美洲等 40 多个国家和地区，国际市场占有率正逐年快速提升。

Founded in 2000, Truking Technology Limited has become one of the major pharmaceutical equipment suppliers in the world. The company specializes in pharmaceutical equipment and the corresponding integrated solutions, and takes the initiative to push forward the R&D of smart pharmaceutical factory. It is a listed A-share company with multiple wholly-owned or controlling subsidiaries, namely Germany based Romaco Group, Truking Watertown, Sichuan Pharmaceutical Design Institute, Truking Feiyun, Truking Ingenuity Biotechnology, Truking Wachine, Truking Intelligent Robot, etc. The company has over 4500 employees around the global, a total asset of RMB 5 billion.

TRUKING has two operation headquarters respectively in Changsha, China and Germany; 3 big research institutes, namely Changsha Central Technology Research Institute, Europe Technology Research Institute, and Sichuan Pharmaceutical Design Institute. Truking has established National Enterprise Technology Center, National Innovation Center, Post-Doctoral Research Center, Academician Expert Workstation and many more technology and innovation platforms. By Mar. 31, 2021, Truking has submitted 3521 patent applications, and been granted with 2094 patents. Beyond China, Truking has applied for 35 PCT international patents, and been granted with 19 patents in USA, Russia, India, Korea, Germany, Indonesia, and many more European countries. Truking also took the lead in formulating 17 national industrial product technical standards. Our products have been exported to more than 40 counties and regions to Asia, Europe, and South America. The international market share is increasing rapidly each year.

ALXL 系列 L 型安瓿洗烘灌封联动线

ALXL Series L Shape Ampoule Compact Line For Washing, Sterilizing&Drying, Filling&Sealing



主要用途 / Main Application

本联动线由 AQCL 系列立式超声波清洗机、KSZ 系列隧道式灭菌干燥机、AGFHL 系列安瓿灌封机三台单机组成。每台可单机使用，也可联动生产，联动生产时可完成喷淋水、超声波清洗、机械手夹瓶、翻转瓶、冲水（瓶内、瓶外）、冲气（瓶内、瓶外）、预热、烘干灭菌、冷却、（前冲气）、灌装、（后充氮）、预热、封口等二十多个工序。主要用于制药厂针剂车间小容量注射剂生产。通用型既可用于安瓿瓶针剂生产也可用于抗生素瓶针剂生产。

This line is composed of AQCL series vertical ultrasonic washing machine, KSZ series sterilizing & drying tunnel, AGFHL series filling & sealing machine. Each machine can run independently, or be connected as a compact line. It can finish processing procedures such as: water spraying, ultrasonic washing, clamping & overturning ampoules by manipulator, water flushing (internal and external), air flushing (internal and external), pre-heating, drying & sterilizing, depyrogenation, cooling, (pre-nitrogen), filling, (post-nitrogen), pre-heating, sealing and etc.. It is mainly used for production of small volume injectable products in pharmaceutical factories. The combined type is suitable for both ampoule and vial production.



性能优势 / Performance Advantage

- ◎ 整线采用 L 型贴墙式布局，有效的实现功能分区，降低交叉污染，提高了药品生产的无菌保障水平，是无菌药品生产的发展趋势，为当前国际先进水平；
 - ◎ 立式超声波清洗机采用超声波清洗与水气独立分开压力喷射冲洗相结合方式，是目前国际最流行、可见异物检测效果最好的清洗设备。整个水气压力喷射清洗过程中，三种介质均采用独立喷针，每一根喷针只固定一种清洗介质，完成一种冲洗工序，避免了交叉污染；
 - ◎ 隧道式灭菌干燥机采用层流原理和热空气高温灭菌工艺，使容器在密闭隧道内的 A 级层流环境下完成预热、干燥、灭菌、去热原和冷却的无菌生产工艺流程，是目前国际最流行，灭菌效果最好的烘干灭菌设备，其热分布均匀、去热原效果好；
 - ◎ 安瓿灌封机采用变速拨轮进瓶，步进式定位灌装、拉丝、封口，阳台式结构。其运行平稳性好、成品合格率高。安瓿灌封机采用 U 型工艺布局结构，封口后的安瓿瓶直接在 D 级区出料，设备的保养与维修在 D 级区完成，同时将灌装系统前置至灌封机前部，减少了 A 级区与洁净区的面积，减少了洁净区的人员数量，降低了风险；
 - ◎ 采用 PLC 控制、人机界面操作，能联动控制和单机操作，自动化程度高，操作人员少，劳动强度低。
- + It adopts L shape layout against wall, effectively realizes function division, reduces cross contamination and improves sterile assurance level of production. It is the trend of sterile products manufacturing development and meets advanced international level.
 - + Vertical ultrasonic washing machine adopts ultrasonic washing and alternant jetting water and airflow. It is the most popular washing equipment with highest clarity in the world. In whole washing process, three washing media adopt independent needles, each group of needles only flush one washing medium, avoids cross contamination.
 - + Sterilizing & drying tunnel adopts the principle of laminar flow and hot air high temperature sterilization process, which can make containers finish aseptic production from pre-heating, drying, sterilizing and cooling under class A laminar flow in closed tunnel. It is the most popular sterilizing & drying equipment with best sterilizing effect. It has good heat distribution and depyrogenation effect.
 - + Ampoule filling & sealing machine adopts variable speed starwheel to infeed ampoules, stepping type positioning for filling & sealing and balcony structure. It has good running stability and high qualified product rate. It adopts U shape structure, sealed ampoules are collected in the D class area. Maintenance and repair is completed in D class area, and filling system is put in the front of the machine, which reduces A class area and clean area, number of persons in clean area, and contamination risks.
 - + It adopts PLC control with HMI operation, which can control the whole line running or independent machine. It ensures normal running of the compact line with high automation, less operator and low labor intensity.





产品参数 / Product Parameters

型号 Model	适应规格 Suitable Sizes	针数 Needle Number	生产能力 Output	电容量 (正常工作耗量) Power (Normalconsumption)	净质量 Net Weight	外形尺寸 (含层流罩高度) Overall Dimensions (Including LF)
ALXL1 ~ 20-F2	1-20ml	12	10000-32000 pcs/h	102.5kW (60kW)	10600kg	8850×4750×2400mm
ALXL1 ~ 10-F1	1-10ml	12	10000-34000 pcs/h	93kW (51kW)	9700kg	8700×4200×2400mm
ALXL1 ~ 20-E2	1-20ml	10	6000-28000 pcs/h	93kW (51kW)	9700kg	8700×4200×2400mm
ALXL1 ~ 5-E1	1-5ml	16	10000-36000pcs/h	76.5kW (41kW)	8900kg	7900×3700×2400mm
ALXL1 ~ 20-D	1-20ml	8	6000-23000 pcs/h	69kW (41kW)	8600kg	7200×3700×2400mm
ALXL1 ~ 20-C1	1-20ml	6	6000-18000 pcs/h	68.2kW (41kW)	8200kg	7200×3300×2400mm
ALXL1 ~ 20-C2	1-20ml	4	4000-12000 pcs/h	47.4kW (28kW)	7600kg	6800×3300×2400mm

ALX 系列直线型安瓿洗烘灌封联动线

ALX Series Linear Shape Ampoule Compact Line For Washing, Sterilizing & Drying, Filling & Sealing



主要用途 / Main Application

本联动机组由 AQCL 系列立式超声波清洗机、KSZ 系列隧道式灭菌干燥机、AGFH 系列安瓿灌封机三台单机组成。每台可单机使用，也可联动生产，联动生产时可完成喷淋水、超声波清洗、机械手夹瓶、翻转瓶、冲水（瓶内、瓶外）、冲气（瓶内、瓶外）、预热、烘干灭菌、冷却、（前冲气）、灌装、（后充氮）、预热、封口等二十多个工序。主要用于制药厂针剂车间小容量注射剂生产。通用型既可用于安瓿瓶针剂，也可用于抗生素瓶针剂的多功能生产。

This line is composed of AQCL Series vertical ultrasonic washing machine, KSZ Series sterilizing & drying tunnel, AGFH Series filling & sealing machine. Each machine can run independently, or be connected as a compact line. It can finish processing procedures such as: water spraying, ultrasonic washing, clamping & overturning ampoules by manipulator, water flushing (internal and external), air flushing (internal and external), pre-heating, drying & sterilizing, depyrogenation, cooling, (pre-nitrogen), filling, (post-nitrogen), preheating, sealing and etc. It is mainly used for production of small volume injectable products in pharmaceutical factories. The combined type is suitable for both ampoule and vial production.



性能优势 / Performance Advantage

- 立式超声波清洗机采用超声波清洗与水气独立分开压力喷射冲洗相结合方式，是目前国际最流行、可见异物检测效果最好的清洗设备。整个水气压力喷射清洗过程中，三种介质均采用独立喷针，每一根喷针只固定一种清洗介质，完成一种冲洗工序，避免了交叉污染；
 - 隧道式灭菌干燥机采用层流原理和热空气高温灭菌工艺，使容器在密闭隧道内的 A 级层流环境下完成预热、干燥、灭菌、去热原和冷却的无菌生产工艺流程，是目前国际最流行、灭菌效果最好的烘干灭菌设备，其热分布均匀，去热原效果好；
 - 安瓿灌封机采用变速拨轮进瓶、步进式定位灌装、拉丝、封口，阳台式结构。其运行平衡性好，成品合格率高；
 - 采用 PLC 控制、人机界面操作，能联动控制和单机操作，自动化程度高，操作人员少，劳动强度低。
- + Vertical ultrasonic washing machine adopts ultrasonic washing and alternant jetting water and airflow. It is the most popular washing equipment with highest clarity in the world. In whole washing process, three washing media adopt independent needles, each group of needles only flush one washing medium, avoids cross contamination.
 - + Sterilizing & drying tunnel adopts the principle of laminar flow and hot air high temperature sterilization process, which can make containers finishing aseptic production from pre-heating, drying, sterilizing and cooling under class A laminar flow in closed tunnel. It is the most popular sterilizing & drying equipment with best sterilizing effect. It has good heat distribution and depyrogenation effect.
 - + Ampoule filling & sealing machine adopts variable speed starwheel to infeed ampoules, stepping type positioning for filling & sealing and balcony structure. It has good running stability and high qualified product rate.
 - + It adopts PLC control with HMI operation, which can control the whole line running or independent machine. It ensures normal running of the compact line with high automation, less operator and low labor intensity.



产品参数 / Product Parameters

型号 Model	适应规格 Suitable Sizes	针数 Needle Number	生产能力 Output	电容量 (正常工作耗量) Power (Normalconsumption)	净质量 Net Weight	外形尺寸 (含层流罩高度) Overall Dimensions (Including LF)
ALX1 ~ 5-G2	1-5ml	16	20000-35000pcs/h	95.45kW (60kW)	10200kg	11000×2820×2340mm
ALX1 ~ 20-F2	1-20ml	12	10000-32000pcs/h	95.45kW (60kW)	10200kg	11000×2820×2340mm
ALX1 ~ 10-F1	1-10ml	12	10000-32000pcs/h	86.15kW (51kW)	9200kg	10300×2620×2340mm
ALX1 ~ 20-E2	1-20ml	10	3600-28000pcs/h	86.15kW (51kW)	9200kg	10300×2620×2340mm
ALX1 ~ 5-E1	1-5ml	10	10000-28000pcs/h	69.5kW (41kW)	8500kg	9000×2620×2340mm
ALX1 ~ 20-D	1-20ml	8	3600-23000pcs/h	63.65kW (41kW)	8200kg	8300×2620×2340mm
ALX1 ~ 20-C1	1-20ml	6	5500-18000pcs/h	63.65kW (41kW)	7800kg	7900×2620×2340mm
ALX1 ~ 20-C2	1-20ml	4	3000-12000pcs/h	43.5kW (28kW)	7200kg	7500×2510×2340mm

AQCL 系列安瓿立式超声波清洗机 AQCL Series Vertical Ultrasonic Washing Machine



主要用途 / Main Application

主要用于制药厂安瓿瓶的清洗，也可用于抗生素瓶、口服液瓶等药用玻璃容器的清洗。

Mainly used for washing of ampoules in pharmaceutical factories; it also can be used for washing other glass containers such as vials and oral liquid bottles.



性能优势 / Performance Advantage

本机为立式转鼓结构，采用超声波清洗和三水三气交替喷射冲洗的原理，对容器逐个清洗。循环水、压缩空气、注射用水均使用独立的喷针，插入瓶内冲洗；无交叉污染，水、气无压力损失，节约能源，且清洗效果好。同时还可目测到整个清洗过程，操作维护方便。

This machine uses vertical gyration structure. It adopts the principle of ultrasonic cleaning and alternant jetting water & airflow washing to clean the vials one by one. Circulation water, compressed air and WFI adopt independent needles which are inserted into vial to flush, no cross contamination, no water and air loss, energy saving, and good washing effect. It can observe whole washing process, and is convenient for operation and maintenance.



产品参数 / Product Parameters

型号 Model	适应规格 Suitable Sizes	生产能力 Output	耗水量 Water Consumption	耗气量 Air Consumption	电容量 Power	净质量 Net Weight	外形尺寸 Overall Dimension
AQCL28/6	1-20ml	18000-38000 pcs/h	0.2-0.3mPa 1.4m ³ /h	0.6MPa70m ³ /h	28kW	4000kg	2530×2850×1620mm
AQCL28/5	1-20ml	18000-32000 pcs/h	0.2-0.3mPa 1.2m ³ /h	0.6MPa60m ³ /h	28kW	4000kg	2530×2850×1620mm
AQCL28/4	1-20ml	18000-28000 pcs/h	0.2-0.3mPa 1.0m ³ /h	0.6MPa50m ³ /h	28kW	4000kg	2530×2850×1620mm
AQCL20/6	1-20ml	10000-32000 pcs/h	0.2-0.3mPa 1.0m ³ /h	0.6MPa50m ³ /h	19kW	2400kg	2400×2400×1620mm
AQCL20/5	1-20ml	6000-27000 pcs/h	0.2-0.3mPa 0.9m ³ /h	0.6MPa45m ³ /h	19kW	2400kg	2400×2400×1620mm
AQCL20/4	1-20ml	6000-23000 pcs/h	0.2-0.3mPa 0.8m ³ /h	0.6MPa40m ³ /h	19kW	2400kg	2400×2400×1620mm
AQCL20/3	1-20ml	6000-17000 pcs/h	0.2-0.3mPa 0.6m ³ /h	0.6MPa35m ³ /h	19kW	2400kg	2400×2400×1620mm
AQCL20/2	1-20ml	6000-11000 pcs/h	0.2-0.3mPa 0.5m ³ /h	0.6MPa30m ³ /h	19kW	2400kg	2400×2400×1620mm

KSZ 系列隧道式灭菌干燥机 KSZ Series Sterilizing & Drying Tunnel



主要用途 / Main Application

主要用于制药厂安瓿瓶的烘干、灭菌、去热原，也可用于抗生素瓶、口服液瓶等药用玻璃容器的烘干灭菌。

This machine is mainly used for sterilizing, drying and depyrogenation of ampoules and other glass containers such as vials and oral liquid bottles in pharmaceutical factories.



性能优势 / Performance Advantage

本机为整体隧道式结构。分为预热、高温灭菌、冷却三部分。采用热空气层流原理和热空气高温灭菌工艺对容器进行灭菌、去热原，采用负压密封，分流技术等核心专利技术，热分布均匀、去热原效果好。

The tunnel is divided into three zones: pre-heating zone, sterilizing zone and cooling zone. It adopts the principle of laminar flow and hot air high temperature sterilization process to realize containers' sterilization and depyrogenation; adopts core patent technologies such as negative pressure sealing and air flow dividing, and has good heat distribution and depyrogenation effect.

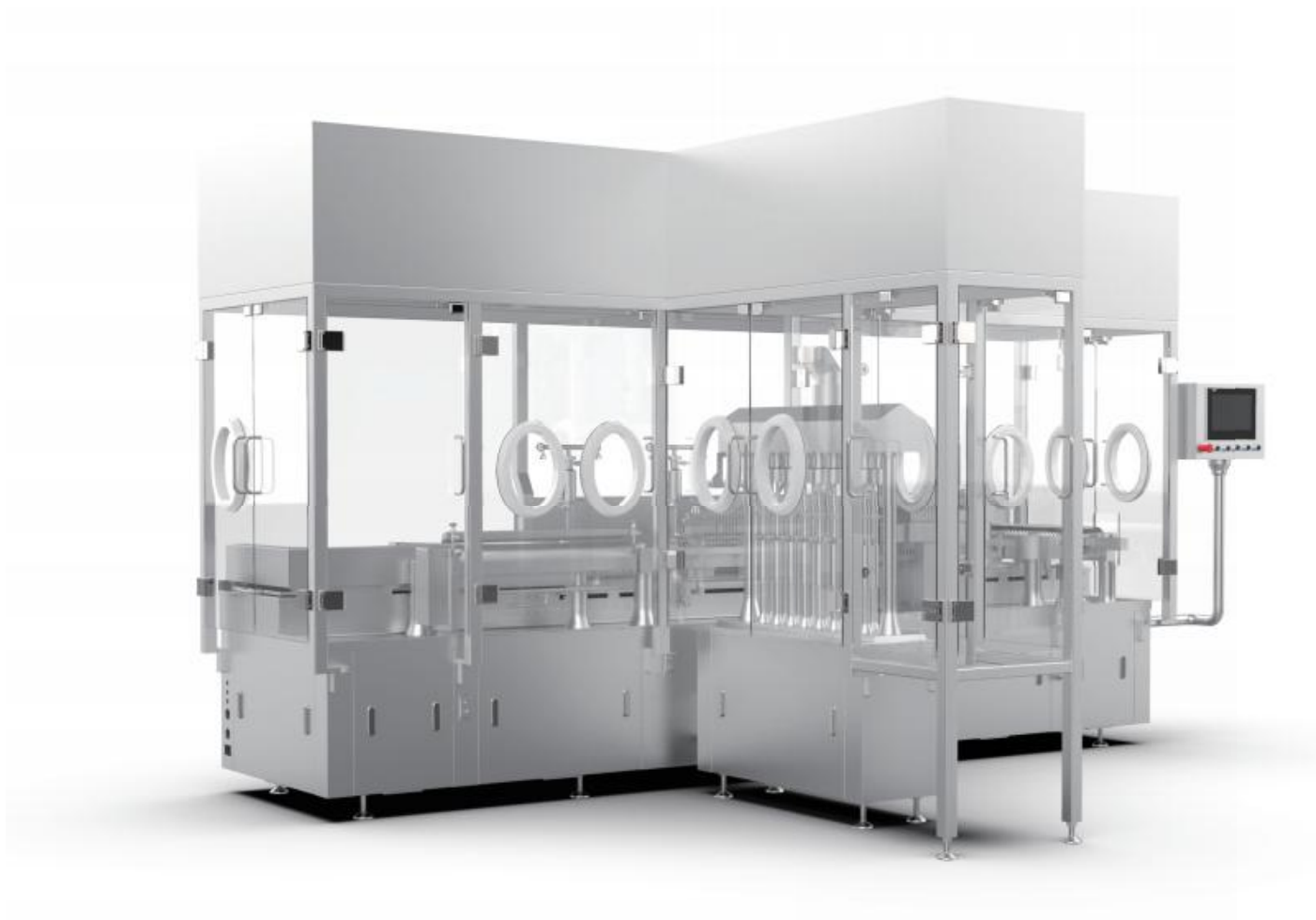


产品参数 / Product Parameters

型号 Model	适应规格 Suitable Sizes	生产能力 Output	输送带 有效宽度 Valid Width of Conveyor Belt	电容量 Power	净质量 Net Weight	外形尺寸 Overall Dimension
KSZ620/60B	1-20ml	12000-67000pcs/h	600mm	72kW	45000kg	4310x1700x2410mm
KSZ620/43B	1-20ml	8000-45000pcs/h	600mm	55kW	4000kg	3680x1700x2410mm
KSZ620/43-EA	1-20ml	8000-45000pcs/h	600mm	54kW	3600kg	2760x1565x2410mm
KSZ420/20B	1-20ml	4000-22000pcs/h	400mm	35kW	2800kg	2360x1465x2350mm

AGFHL 系列安瓿灌封机

AGFHL Series Ampoule Filling & Sealing Machine



主要用途 / Main Application

主要用于制药厂安瓿瓶在无菌条件下的灌装和封口。

It is mainly used for filling and sealing of ampoule under aseptic conditions in pharmaceutical factories.



性能优势 / Performance Advantage

- 本机为多工位步进式传输系统，阳台式结构。能完成蛟龙分瓶拨轮进瓶、前充氮、灌装、后充氮、预热、拉丝封口等工序。采用匀速拨轮进瓶，步进式定位灌装、封口，其运行平稳性好，成品合格率高；
 - 安瓿灌封机采用 U 型工艺布局结构，封口后的安瓿瓶直接在 D 级区出料，设备的保养与维修在 D 级区域完成，同时将灌装系统前置至灌封机前部，减少了 A 级区与洁净区的面积，减少了洁净区的人员数量，降低了风险。采用 L 型入墙式结构，为单侧操作，有效实现了功能分区，降低交叉污染，提高药品生产无菌保障水平，是无菌药品生产的发展趋势，达到当前国际先进水平；
 - 本机为我公司集成和延伸的各种先进技术基础上，结合现代灌装原理，设计、开发的一种无菌安瓿灌封机可选配 ORABS 系统和灌装 CIP/SIP 系统等。本机高配时完全符合 EUcGMP 和 USFDA 等国际标准。
- + This machine is multi-stations stepping conveying system with balcony structure. It can finish procedures such as ampoule conveying, pre-nitrogen, filling, post nitrogen, pre-heating and sealing etc. It adopts invariant speed starwheel to infeed ampoules and stepping type positioning for filling and sealing. It has good running stability and high qualified product rate.
 - + It adopts U shape structure, sealed ampoules are collected in the class D area, Maintenance and repair is completed in class D area, and filling system is put in the front of the machine, which reduces class A area and clean area, number of persons in clean area, and contamination risks. It adopts L shape wall-in structure with single side operation. It can realize function division effectively, reduce cross contamination, improve sterile assurance of production. It is the development trend of sterile products manufacturing, and meets international advance level.
 - + Based on all kinds of advanced technology in our company, together with the modern filling principle, we designed and developed this kind of high speed ampoule sterile filling& sealing machine. There are options for ORABS, CIP&SIP for filling system. The high configuration of this method can fully meet EU cGMP and FDA standard.

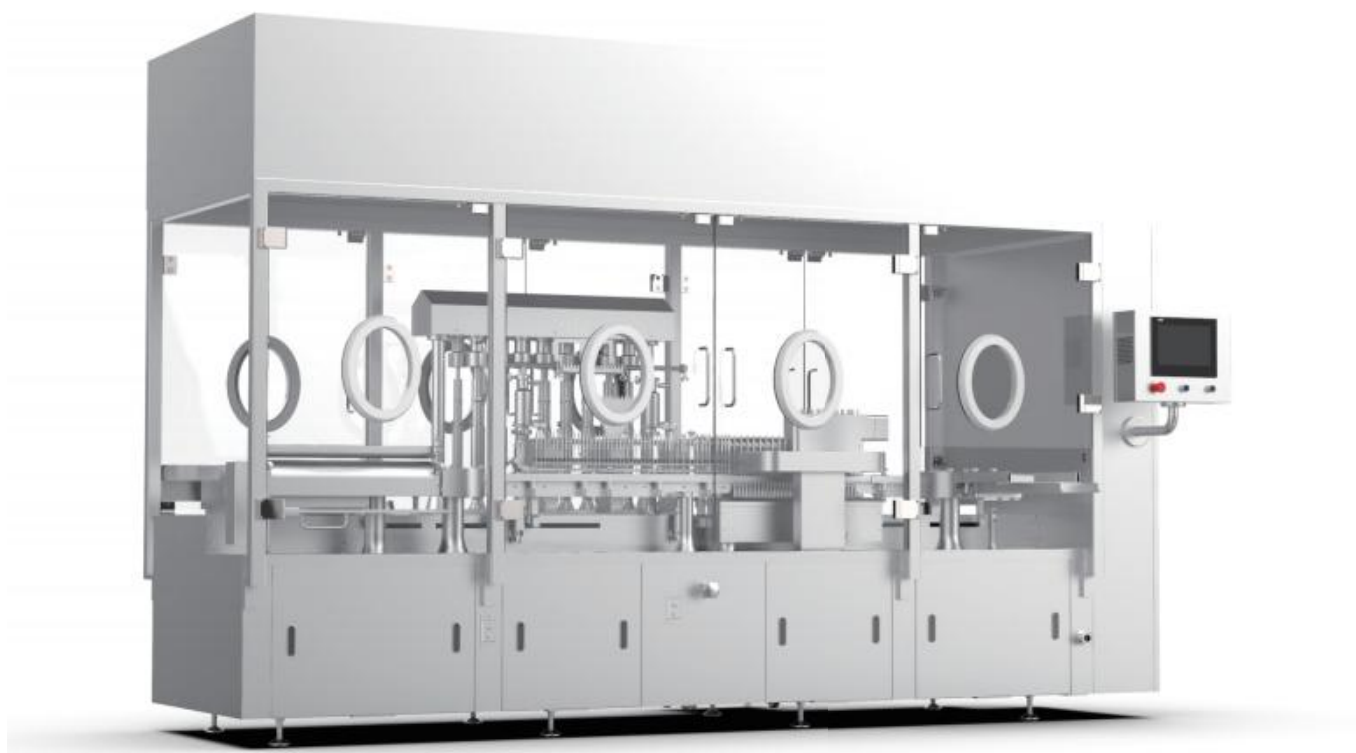


产品参数 / Product Parameters

型号 Model	适应规格 Suitable Sizes	生产能力 Output	燃气耗量 Gas Consumption	氧气耗量 Oxygen Consumption	电容量 Power	净质量 Net Weight	外形尺寸 Overall Dimension
AGFHL20/16	1-5ml	10000-38000 pcs/h	0.03-0.05mPa 0.8m ³ /h	0.3-0.5mPa 2.4m ³ /h	13.8kW	4500kg	5400×2250×1900mm
AGFHL20/12	1-20ml	8000-32000 pcs/h	0.03-0.05mPa 0.6m ³ /h	0.3-0.5mPa 1.8m ³ /h	12.2kW	4500kg	5400×2250×1900mm
AGFHL16/12	1-10ml	8000-32000 pcs/h	0.03-0.05mPa 0.6m ³ /h	0.3-0.5mPa 1.8m ³ /h	12kW	4000kg	4850×2250×1900mm
AGFHL16/10	1-20ml	6000-29000 pcs/h	0.03-0.05mPa 0.5m ³ /h	0.3-0.5mPa 1.5m ³ /h	11.3kW	4000kg	4850×2250×1900mm
AGFL8	1-20ml	6000-24000 pcs/h	0.03-0.05mPa 0.4m ³ /h	0.3-0.5mPa 1.2m ³ /h	9.25kW	3000kg	4040×2000×1840mm
AGFL4/6	1-20ml	6000-18000 pcs/h	0.03-0.05mPa 0.3m ³ /h	0.3-0.5mPa 0.9m ³ /h	8.2kW	2600kg	3300×2000×1840mm
AGFL4	1-20ml	4000-12000 pcs/h	0.03-0.05mPa 0.2m ³ /h	0.3-0.5mPa 0.6m ³ /h	7.4kW	2600kg	3300×2000×1840mm

AGFH 系列安瓿灌封机

AGFH Series Ampoule Filling & Sealing Machine



主要用途 / Main Application

主要用于制药厂安瓿瓶在无菌条件下的灌装和封口。

It is mainly used for filling and sealing of ampoule under aseptic conditions in pharmaceutical factories.



性能优势 / Performance Advantage

- 本机为多工位步进式传输系统，阳台式结构，能完成蛟龙分瓶拨轮进瓶、前充氮、灌装、后充氮、预热、拉丝封口等工序。采用匀速拨轮进瓶，步进式定位灌装、封口，其运行平稳性好，成品合格率高。其灌装形式可根据用户的要求配置玻璃泵、金属泵、陶瓷泵或蠕动泵进行灌装。
- 本机为我公司集成和延伸的各种先进技术基础上，结合现代灌装原理，设计、开发的一种无菌安瓿灌封机可选配 ORABS 系统和灌装 CIP/SIP 系统等。本机高配时完全符合 EUcGMP 和 USFDA 等国际标准。
- + This machine's structure is multi-stations stepping conveying system with balcony structure. It can finish procedures such as ampoule conveying, pre-nitrogen, filling, post nitrogen, pre-heating and sealing etc. It adopts invariant speed starwheel to infeed ampoules and stepping type positioning for filling and sealing, it has good running stability and high qualified product rate. It can be equipped with glass pump, stainless steel pump, ceramic pump or peristaltic pump for filling as per customer's requirement.
- + Based on all kinds of advanced technology in our company, together with the modern filling principle, we designed and developed this kind of high speed ampoule sterile filling& sealing machine. There are options for ORABS, CIP&SIP for filling system. The high configuration of this method can fully meet EU cGMP and FDA standard.



产品参数 / Product Parameters

型号 Model	适应规格 Suitable Sizes	生产能力 Output	燃气耗量 Gas Consumption	氧气耗量 Oxygen Consumption	电容量 Power	净质量 Net Weight	外形尺寸 (含层流罩高度) Overall Dimension Including LF
AGFH20/16	1-5ml	10000-38000 pcs/h	0.03-0.05mPa 0.8m ³ /h	0.3-0.5mPa 2.4m ³ /h	12.8kW (7kW)	4000kg	4100×1800×1900mm
AGFH20/12	1-20ml	8000-28800 pcs/h	0.03-0.05mPa 0.6m ³ /h	0.3-0.5mPa 1.8m ³ /h	11.2kW (7kW)	4000kg	4100×1800×1900mm
AGFH16/12	1-10ml	8000-28800 pcs/h	0.03-0.05mPa 0.6m ³ /h	0.3-0.5mPa 1.8m ³ /h	10.9kW (6.7kW)	3400kg	3600×1800×1900mm
AGFH16/10	1-20ml	6000-24000 pcs/h	0.03-0.05mPa 0.5m ³ /h	0.3-0.5mPa 1.5m ³ /h	10.1kW (6.7kW)	3400kg	3600×1800×1900mm
AGFH8	1-20ml	6000-19000 pcs/h	0.03-0.05mPa 0.4m ³ /h	0.3-0.5mPa 1.2m ³ /h	8.55kW (5kW)	2600kg	3120×1800×1840mm
AGFH8/6	1-20ml	6000-18000 pcs/h	0.03-0.05mPa 0.3m ³ /h	0.3-0.5mPa 0.9m ³ /h	6.95kW (4.2kW)	2200kg	2800×1800×1840mm
AGFH8/4	1-20ml	3000-12000 pcs/h	0.03-0.05mPa 0.2m ³ /h	0.3-0.5mPa 0.6m ³ /h	6.15kW (4.2kW)	2200kg	2800×1800×1840mm

KLX 系列西林瓶洗烘灌封联动线

KLX Series Linear Shape Vial (Liquid) Compact Line For Washing, Sterilizing & Drying, Filling & Plugging, Sealing



主要用途 / Main Application

本联动线组由 KQCL 系列立式超声波洗瓶机、KSZ 系列隧道式灭菌干燥机、KGSA 系列灌装加塞机、ZG 系列轧盖机四台单机组成。每台可单机使用，也可联动生产，联动生产时可完成喷淋水、超声波清洗、机械手夹瓶、翻转瓶、冲水（瓶内、外）、冲气（瓶内、外）、预热、烘干灭菌、去热原、冷却、理瓶、（前充氮）、灌装、（后充氮）、理塞、压塞、理盖、轧盖等二十多个工序。主要用于制药厂西林瓶水针剂和冻干粉针剂的生产。

This line is composed of KQCL series vertical ultrasonic washing machine, KSZ series sterilizing & drying tunnel, KGS series filling & plugging machine, ZG series capping machine. Each machine can run independently, or be connected as a compact line. It could finish processing procedures such as: water spraying, ultrasonic washing, clamping & overturning vials by manipulator, water flushing (internal and external), air flushing (internal and external), pre-heating, drying & sterilizing, depyrogenation, cooling, vial orienting, (pre-nitrogen), filling, (post-nitrogen), stoppers orienting, plugging, caps orienting, capping and so on. It is mainly used for production of vial liquid and lyophilized products in pharmaceutical factories.



性能优势 / Performance Advantage

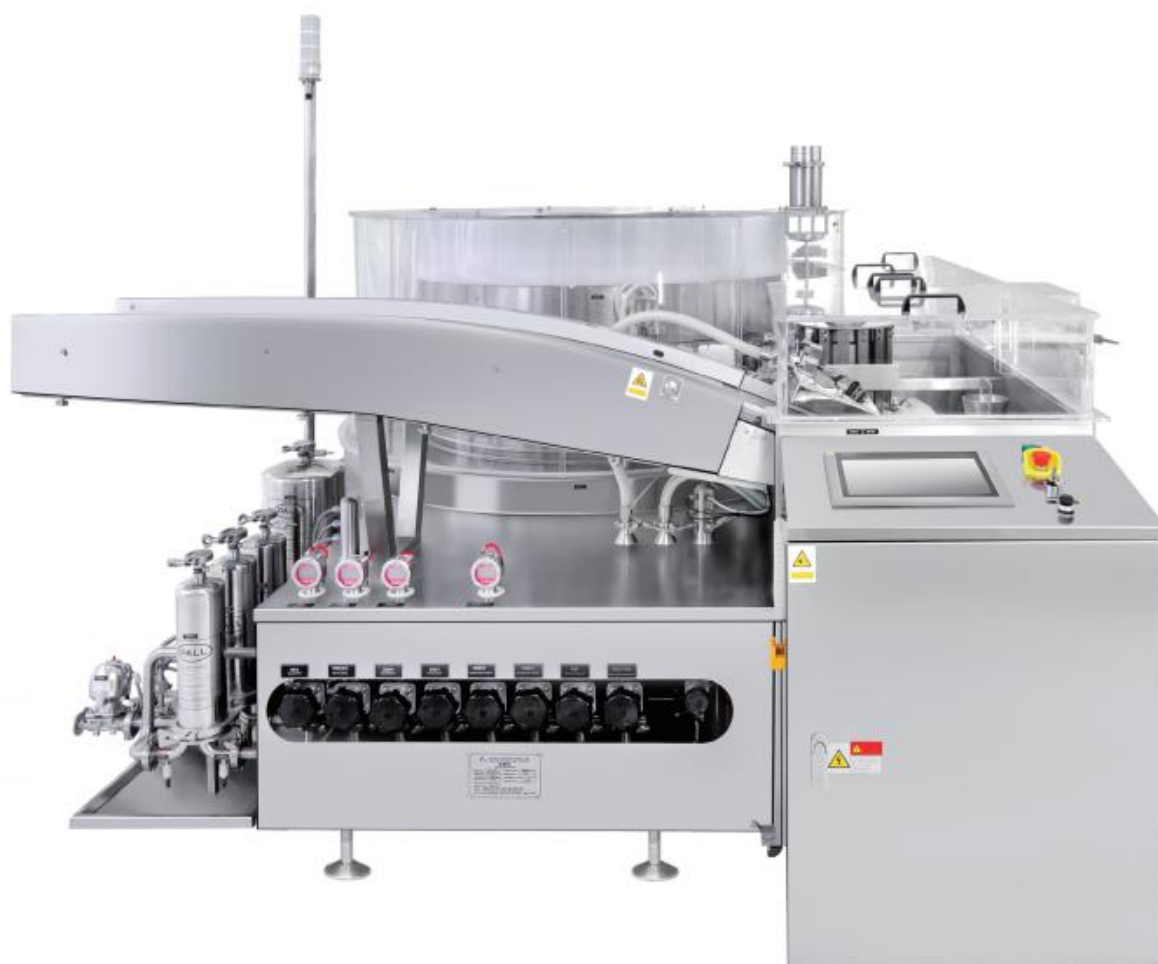
- 立式超声波清洗机采用超声波清洗与水气独立分开压力喷射冲洗相结合方式，是目前国际最流行、可见异物检测效果最好的清洗设备。整个水气压力喷射清洗过程中，三种介质均采用独立喷针，每一根喷针只固定一种清洗介质，完成一种冲洗清洗工序，避免了交叉污染；
 - 隧道式灭菌干燥机采用层流原理和热空气高温灭菌工艺，使容器在密闭隧道内的 A 级层流环境下完成预热、干燥、灭菌、去热原和冷却的无菌生产工艺流程，是目前国际最流行、灭菌效果最好的烘干灭菌设备，其热分布均匀，去热原效果好；
 - 西林瓶灌装加塞机采用同步带 V 型块进行定位，灌装针头进行往复跟踪灌装，直线连续式上塞、旋转式压塞，是目前国际最流行、定位、灌装、加塞合格率最高的设备；
 - 轧盖机采用小单刀旁置随动滚压式轧盖原理，且轧刀在上下、圆周方向均有微调量，其轧盖合格率高，适应性好；
 - 采用 PLC 控制人机界面操作，能联动控制和单机操作，保证了整个机组的正常运行，其自动化程度高，操作人员少，劳动强度低。
- + Vertical ultrasonic washing machine adopts ultrasonic washing and alternant jetting water and airflow. It is the most popular washing equipment with highest clarity in the world. In whole washing process, three washing media adopt independent needles, each group of needles only flush one washing medium, avoids cross contamination.
 - + Sterilizing & drying tunnel adopts the principle of laminar flow and hot air high temperature sterilization process, which can make containers finish aseptic production from pre-heating, drying, sterilizing and cooling under class A laminar flow in closed tunnel. It is the most popular sterilizing & drying equipment with best sterilizing effect. It has good heat distribution and depyrogenation effect.
 - + The vial filling and stoppering machine adopts synchronous belt V-shaped block for positioning, filling needle for reciprocating tracking filling, linear continuous stopper feeding, rotary stopper pressing, it is the most popular equipment for positioning, filling and stoppering with the highest qualified rate in the world.
 - + Vial filling & plugging machine adopts synchronous belt with V block to locate, reciprocating tracking filling, linear continuous stopper taking and rotary stopper plugging, it has the most popular and highest qualified rate on bottle orienting, filling and plugging in the world. Capping machine adopts single knife capping method. There is fine-tuning on top, bottom and circle direction. It has high capping qualified rate and good adaptability.
 - + It adopts PLC control with HMI operation, which can control the whole line running or independent machine. It ensures normal running of the compact line with high automation, fewer operator and low labor intensity.



产品参数 / Product Parameters

型号 Model	适应规格 Suitable Sizes	生产能力 Output	电容量 Power	净质量 Net Weight	外形尺寸 Overall Dimensions
KLX2 ~ 20-D	2-30ml	6000-30000pcs/h	132.5kW	11000kg	12000×2800×2400mm
KLX2 ~ 20-C	2-30ml	6000-27000pcs/h	112kW	8700kg	12000×2600×2340mm
KLX2 ~ 20-B	2-30ml	6000-18000pcs/h	90kW	7600kg	10300×2600×2340mm
KLX2 ~ 20-A	2-30ml	6000-12000pcs/h	73.5kW	7100kg	9400×2600×2340mm

KQCL 系列西林瓶立式超声波清洗机 KQCL Series Vertical Ultrasoni Washing Machine



主要用途 / Main Application

主要用于制药厂西林瓶的清洗，也可用于安瓿瓶、口服液瓶等药用玻璃容器的清洗。

This machine is mainly used for washing of vials in pharmaceutical factories; It also can be used for washing glass containers such as ampoules and oral liquid bottles.

性能优势 / Performance Advantage

本机为立式转鼓结构，采用机械手夹瓶、翻转和喷针作往复跟踪方式；利用超声波清洗和三水三气交替喷射冲洗的原理，对容器逐个清洗。循环水、压缩空气、注射用水均使用独立的喷针，插入瓶内冲洗；无交叉污染，水、气无压力损失，节约能源，且清洗效果好。同时还可目测到整个清洗过程，操作维护方便。

This machine uses vertical gyration structure. It adopts the principle of ultrasonic cleaning and alternant jetting water & airflow washing to clean the vials one by one. Circulation water, compressed air and WFI adopt independent needles which are inserted into vial to flush, no cross contamination, no water and air loss, energy saving, and good washing effect. It can observe whole washing process, and is convenient for operation and maintenance.

产品参数 / Product Parameters

型号 Model	适应规格 Suitable Sizes	生产能力 Output	耗水量 Water Consumption	耗气量 Air Consumption	电容量 Power	净质量 Net Weight	外形尺寸 Overall Dimension
KQCL28/5	1-20ml	8000-32000 pcs/h	0.2-0.3MPa 1.2m ³ /h	0.6mPa60m ³ /h	28kW	4000kg	2530×2850×1620mm
KQCL28/4	1-25ml	8000-26000 pcs/h	0.2-0.3MPa 1.0m ³ /h	0.6mPa50m ³ /h	28kW	4000kg	2530×2850×1620mm
KQCL28/3	1-30ml	6000-19000 pcs/h	0.2-0.3MPa 0.9m ³ /h	0.6mPa45m ³ /h	28kW	4000kg	2530×2850×1620mm
KQCL28/2	1-100ml	3000-13000 pcs/h	0.2-0.3MPa 0.8m ³ /h	0.6mPa40m ³ /h	28kW	4000kg	2530×2850×1620mm
KQCL20/5	1-20ml	6000-29000 pcs/h	0.2-0.3MPa 0.9m ³ /h	0.6mPa45m ³ /h	19kW	2400kg	2510×2400×1840mm
KQCL20/4	1-25ml	6000-23000 pcs/h	0.2-0.3MPa 0.8m ³ /h	0.6mPa40m ³ /h	19kW	2400kg	2510×2400×1840mm
KQCL20/3	1-30ml	6000-17000 pcs/h	0.2-0.3MPa 0.6m ³ /h	0.6mPa35m ³ /h	19kW	2400kg	2510×2400×1840mm
KQCL20/2	1-100ml	2400-11000 pcs/h	0.2-0.3MPa 0.5m ³ /h	0.6mPa30m ³ /h	19kW	2400kg	2510×2400×1840mm

KSZ 系列隧道式灭菌干燥机 KSZ Series Sterilizing & Drying Tunnel



主要用途 / Main Application

主要用于制药厂西林瓶的烘干、灭菌、去热原。也可用于安瓿瓶、口服液瓶等药用玻璃容器的烘干灭菌。

This machine is mainly used for sterilizing, drying and depyrogenation of vials and other medical glass bottles such as ampoules and oral liquid bottles in pharmaceutical factories



性能优势 / Performance Advantage

本机为整体隧道式结构，分为预热、高温灭菌、冷却三部分。采用热空气层流原理和热空气高温灭菌工艺对容器进行灭菌、去热原，采用负压密封，分流技术等核心专利技术，热分布均匀、去热原效果好。

The tunnel is divided into three zones: pre-heating zone, sterilizing zone and cooling zone. It adopts the principle of laminar flow and hot air high temperature sterilization process to realize containers' sterilization and depyrogenation; adopts core patent technologies such as negative pressure sealing and air flow dividing, and has good heat distribution and depyrogenation effect.



产品参数 / Product Parameters

型号 Model	适应规格 Suitable Sizes	生产能力 Output	输送带 有效宽度 Valid Width of Conveyor Belt	电容量 Power	净质量 Net Weight	外形尺寸 Overall Dimension
KSZ920/100B	2-100ml	2500-47000pcs/h	900mm	129kW	9200kg	5730×2050×2400mm
KSZ620/75B	2-100ml	780-31800pcs/h	600mm	90kW	5200kg	4940×1700×2410mm
KSZ620/60B	2-100ml	780-24000pcs/h	600mm	72kW	4500kg	4310×1700×2410mm
KSZ620/43B	2-100ml	600-16000pcs/h	600mm	54kW	4000kg	3680×1700×2410mm
KSZ420/20	2-100ml	300-8200pcs/h	400mm	35kW	2800kg	2360×1465×2350mm
KSZ1200/60	10-100ml	2200-22000pcs/h	1220mm	78kW	8000kg	4410×2310×3175mm
KSZ1200/100	10-100ml	3600-35000pcs/h	1220mm	123kW	11000kg	5566×2310×3175mm
KSZ1200/120	10-100ml	4200-41000pcs/h	1220mm	146kW	14000kg	7930×2310×3175mm
KSZ1200/160	10-100ml	5800-57000pcs/h	1220mm	191kW	18000kg	9030×2310×3175mm
KSZ1200/180	10-100ml	6400-60000pcs/h	1220mm	214kW	21000kg	9430×2310×3175mm
KSZ1200/240	10-100ml	8400-82000pcs/h	1220mm	278kW	36000kg	13000×2310×3175mm

KGSA12、KGSA6 系列西林瓶灌装加塞机 KGSA12\KGSA6 Series Linear Filling & Plugging Machine



主要用途 / Main Application

主要用于制药厂西林瓶水针剂和冻干粉针剂的灌装和加塞。

It is mainly used for filling and plugging of vial liquid and lyophilized products in pharmaceutical factories.

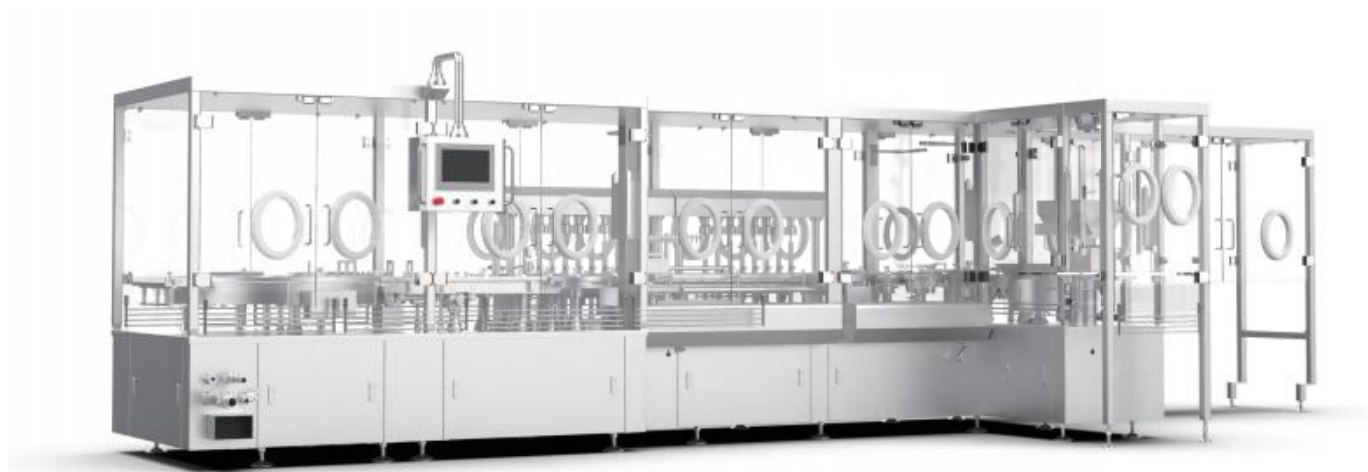
性能优势 / Performance Advantage

- 本机采用单排水平同步带输瓶、由伺服电机控制拨轮进瓶、灌针直线水平往复跟踪、整体式吸盘加塞及出瓶，自动完成理瓶、进瓶、(前充氮)、灌装、(后充氮)、理塞、加塞等工序，可选择性完成半加塞或全加塞工艺；
- 本机为我公司集成和延伸的各种先进技术基础上，结合现代灌装原理，设计、开发的一种新型全伺服控制的高速无菌灌装加塞机，可选配 ORABS 系统、在线 IPC 称重计量系统和灌装 CIP/SIP 系统等。本机高配时可完全符合 EUcGMP 和 USFDA 等国际标
准。
- + This machine adopts single row synchronous belt for conveying, and servo motor control for following movement: infeed via starwheel, filling needle up and down & fro and back, integral type sucker plugging and outfeed. It can automatically finish procedures of vial orienting, conveying, (pre-nitrogen), filling,(post-nitrogen), stopper orientation, plugging etc. For the plugging, it can do full plugging and half plugging.
- + Based on all kinds of advanced technology in company, together with the filling principle, we designed and developed this kind of high speed sterile filling machine with all servo system. There are options for ORABS, IPC weighing system, CIP&SIP for filling system. The high configuration of this method can fully meet EU cGMP and FDA standard.

产品参数 / Product Parameters

型号 Model	适应规格 Suitable Sizes	生产能力 Output	灌装 头数 Filling Heads	压塞 头数 Stoppering Heads	电容量 Power	净质量 Net Weight	外形尺寸 Overall Dimension
KGSA12	2-30ml	6000- 24000pcs/h	12	16/24/32	30kW	6800kg	5818×2504×1900mm
KGSA12/10	2-30ml	6000- 20000pcs/h	10	16/24/32	28kW	6800kg	5818×2504×1900mm
KGSA12/8	2-30ml	6000- 16000pcs/h	8	16/24/32	26kW	6800kg	5818×2504×1900mm
KGSA6	2-30ml	3000- 12000pcs/h	6	16/24/32	25kW	5400kg	5185×2504×1900mm
KGSA6/4	2-30ml	3000- 8000pcs/h	4	16/24/32	23kW	5400kg	5185×2504×1900mm
KGSA6/2	2-100ml	1000- 4000pcs/h	2	16/24/32	20kW	5400kg	5185×2504×1900mm

KGSA12/16 系列西林瓶灌装加塞机 KGSA12/16 Series L Shape Filling & Plugging Machine



主要用途 / Main Application

主要用于制药厂西林瓶水针剂和冻干粉针剂的灌装和加塞。

It is mainly used for filling and plugging of vial liquid and lyophilized products in pharmaceutical factories.

性能优势 / Performance Advantage

- 本机采用双通道进瓶，单排水平同步带输瓶、由伺服电机控制灌针直线水平往复跟踪、整体式吸盘加塞及出瓶，自动完成理瓶、进瓶、(前充氮)、灌装、(后充氮)、理塞、加塞等工序，可选择性完成半加塞或全加塞工艺；
- 本机为我公司集成和延伸的各种先进技术基础上，结合现代灌装原理，设计、开发的一种新型全伺服控制的高速无菌灌装加塞机，可选配 ORABS 系统、在线 IPC 称重系统和灌装 CIP/SIP 系统等。本机高配时可完全符合 EUcGMP、FDA 等国际标准。
- + This machine adopts double-channel infeed, single row synchronous belt for conveying, and servo motor control for following movement: filling needle up and down & fro and back, integral type sucker plugging and outfeed. It can automatically finish procedures of vial orienting, conveying, (pre-nitrogen), filling,(post-nitrogen), stopper orientation, plugging etc. For the plugging, it can do full plugging and half plugging.
- + Based on all kinds of advanced technology in company, together with the filling principle, we designed and developed this kind of high speed sterile filling machine with all servo system. There are options for ORABS, IPC weighing system, CIP&SIP for filling system. The high configuration of this method can fully meet EU cGMP and FDA standard.

产品参数 / Product Parameters

型号 Model	适应规格 Suitable Sizes	生产能力 Output	灌装头数 Filling Heads	压塞头数 Stoppering Heads	电容量 Power	净质量 Net Weight	外形尺寸 Overall Dimension
KGSA12/16	2-30ml	6000- 30000pcs/h	16	16/24/32	34kW	7000kg	5818×2504×1900mm

ZG 系列西林瓶轧盖机 ZG Series Capping Machine



主要用途 / Main Application

主要用于制药厂西林瓶的轧盖封口

This machine is mainly used for capping of vials in pharmaceutical factories.

性能优势 / Performance Advantage

- 本机采用旁置单刀柔性滚压轧盖结构，自动完成输瓶、上盖、轧盖等工序。根据设备放置房间洁净级别的不同，选择以下不同功能配置的机型；
- + This machine adopts single knife following capping structure, It can automatically finish vial conveying, cap infeeding and capping etc. According to different cleaning levels of machine room, it can choose the following model with different function configuration.

产品参数 / Product Parameters

型号 Model	适应规格 Suitable Sizes	生产能力 Output	轧盖头数 Capping	电容量 Power	净质量 Net Weight	外形尺寸 Overall Dimension
ZG6A	2-50ml	1800-6000 pcs/h	6	5.2kW	900kg	1740×1900×2000mm
ZG15A	2-100ml	3600-24000 pcs/h	15	7.6kW	1700kg	2360×2300×2000mm
ZG10	2-250ml	3000-18000 pcs/h	10	11kW	2500kg	1985×2020×1900mm
ZG16	2-100ml	9000-33000 pcs/h	16	12kW	3500kg	3460×2010×1900mm

KLXF 系列西林瓶粉针分装洗烘灌封联动线

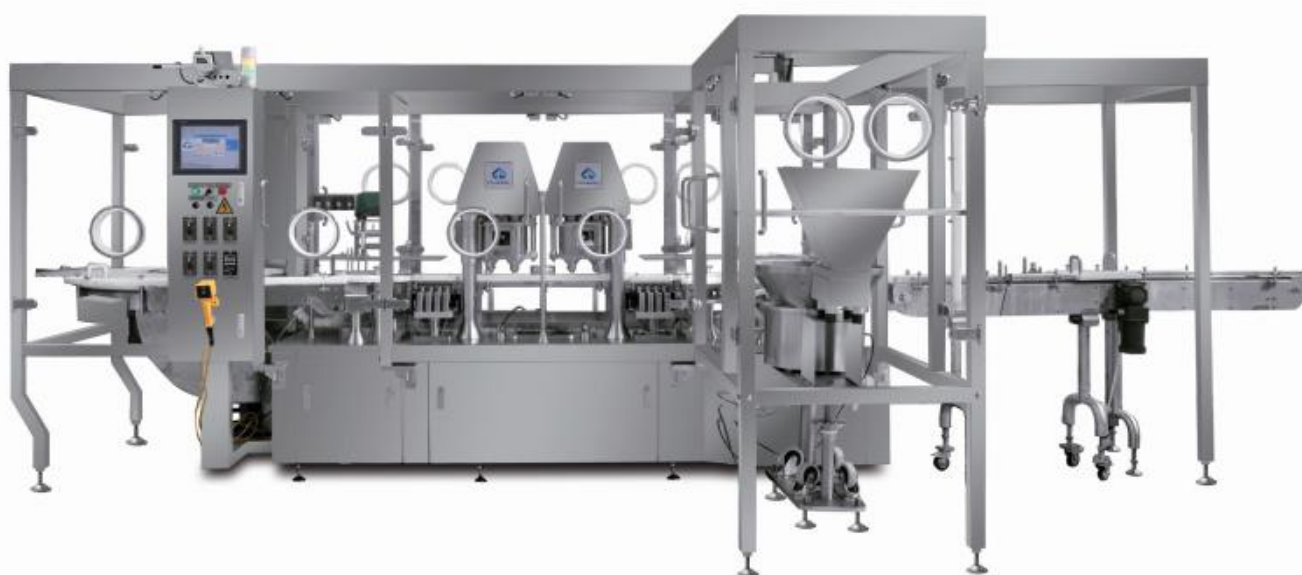
KLXF Series Vial (Powder) Compact Line For Washing, Sterilizing & Drying, Filling & Plugging, Sealing



产品参数 / Product Parameters

型号 Model	适应规格 Suitable Sizes	生产能力 Output	分装形式 Filling Method	电容量 Power	净质量 Net Weight	外形尺寸 Overall Dimension
KLXF5 ~ 100-A	5-100ml	1000-7200pcs/h	Augertype	76kW	8000kg	10000×2600×2340mm
KLXF5 ~ 100-B	5-30ml	6000-18000pcs/h	Augertype	90kW (68kW)	9000kg	11000×2600×2340mm

KFGC 系列西林瓶螺杆分装机 KFGC Series Powder Auger Filling & Plugging Machin



主要用途 / Main Application

主要用于制药厂西林瓶无菌粉针剂类药物的分装和加塞

It mainly used for sterile powder filling & plugging of vial in the pharmaceutical industry.



性能优势 / Performance Advantage

- ◎ 本机采用伺服电机控制螺杆分装与旋转跟踪加塞的方式, 自动完成输瓶、进瓶、分装、理塞、加塞等工序;
 - ◎ KFGC 系螺杆分装加塞机列采用垂直同步带直线式传瓶、定位分装专利技术、蛟龙带摆臂取样机构, 整机间歇走瓶, 分装精度高, 操作便捷;
 - ◎ 通过调用程序可实现生产快结束时的单桶分装;
 - ◎ 高配时可配置全称重系统, 实现高精密分装, 且自动化程度高, 为当前最领先技术, 完全符合 EUcGMP 和 USFDA 标准。
- + This machine adopts servo motor to control filling and rotary plugging movement. It can finish procedures such as vial infeeding, conveying, filling, stopper orienting and plugging automatically.
 - + KFGC Series powder auger filling & plugging machine adopts vertical synchronous belt linear conveying system, locating filling patent technology, sampling device of screw with swing arm, intermittent bottle conveying, with high precision and easy operation.
 - + It can realize single bucket filling before completion of production through calling program.
 - + The high configuration of this machine adopts 100% weighing system which is the latest technology at present with high automation, and is fully according with the international standards including EU cGMP and US FDA..



产品参数 / Product Parameters

型号 Model	适应规格 Suitable sizes	生产能力 Output	分装范围 Filling range	分装头数 Filling heads	电容量 Power	净质量 Net Weight	外形尺寸 Overall dimension
KFGC2A	5-100ml	1000-7200pcs/h	0.2-25g	2	10kW	3000kg	3836×2050×2400mm

KFGL 系列西林瓶螺杆分装机 KFGL Series Powder Auger Filling & Plugging Machine



主要用途 / Main Application

主要用于制药厂西林瓶无菌粉针剂类药物的分装和加塞。

It mainly used for sterile powder filling & plugging of vial in the pharmaceutical industry.



性能优势 / Performance Advantage

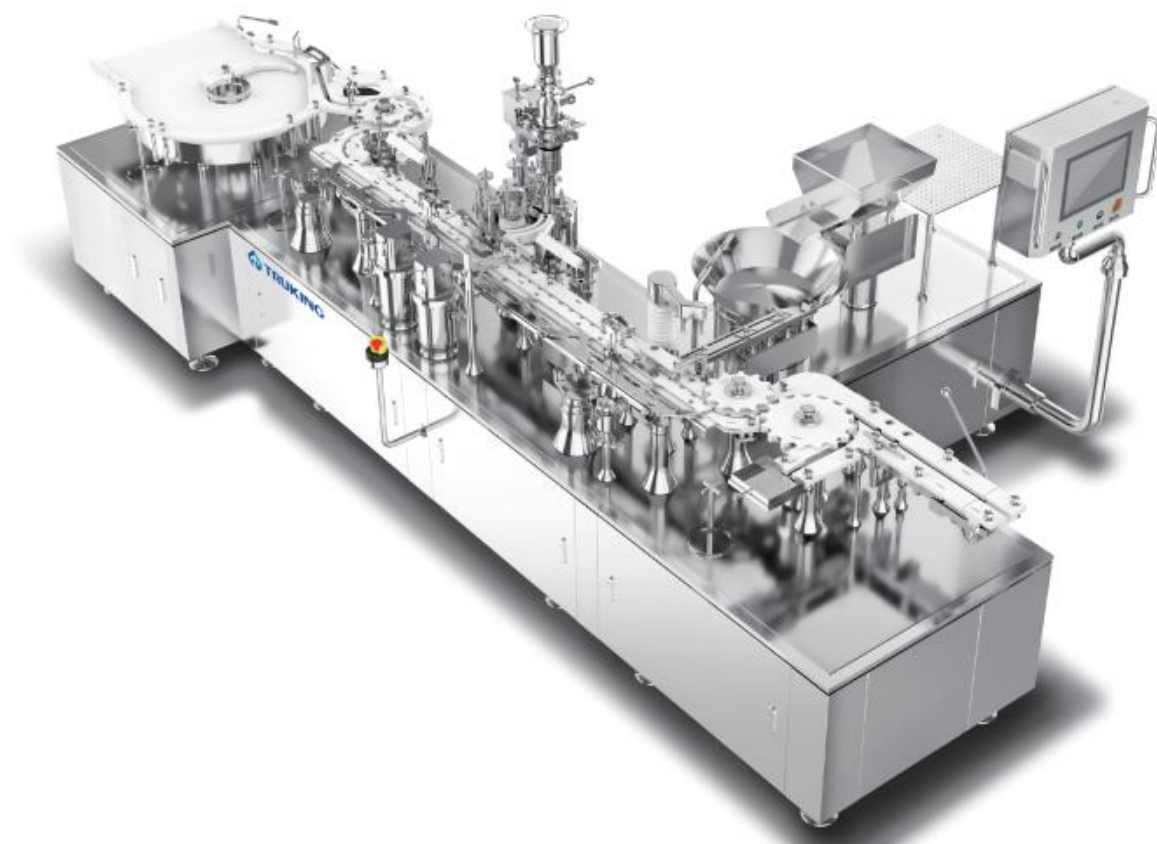
- ◎ 本机采用伺服电机控制螺杆分装与旋转跟踪加塞的方式，自动完成输瓶、进瓶、分装、理塞、加塞等工序；
- ◎ 采用垂直同步带直线式传瓶、扇形块结构连续进出瓶、定位分装专利技术、绞龙带摆臂取样机构，自动化程度高，为当前最领先技术；
- ◎ 通过调用挡瓶程序或更换进瓶拨轮可实现生产快结束时的单桶分装。
- + This machine adopts servo motor to control filling, rotary plugging movement. It can finish procedures such as vial infeeding, conveying, filling, stopper orienting and plugging automatically.
- + It adopts vertical synchronous belt linear conveying, fan-shaped block structure positioning packaging technology patents, screw with a swing arm sampling mechanism, with high degree of automation, is currently the most advanced technology.
- + It can realize single bucket filling before completion of production through calling the program of vial retaining or replacing the infeed starwheel.



产品参数 / Product Parameters

型号 Model	适应规格 Suitable Sizes	生产能力 Output	分装范围 Filling Range	分装头数 Filling Heads	电容量 Power	净质量 Net Weight	外形尺寸 Overall Dimension
KFGL4	5-30ml	6000-18000pcs/h	0.2-5g	4	14.7kW	3000kg	4400×2100×2400mm

插管式粉末分装机 Intubation Powder Packager



主要用途 / Main Application

主要用于西林瓶无菌粉针类药物定量分装，并同机完成加塞的机器；可用于与隧道烘箱、自动进出料系统联机运行或独立运行。

It is mainly used for quantitative packing of sterile powder needle drugs in cillin bottle, and the machine with which the plug is added; it can be used for on-line operation or independent operation with tunnel oven, automatic feeding system.



性能优势 / Performance Advantage

- ◎ PDS4 系列全伺服粉末分装机采用行走梁结构、相对静止时定位灌装、间歇式压塞，是目前国际流行且加塞合格率高的设备；
 - ◎ 采用全伺服驱动系统，无机械传动；
 - ◎ 适应规格 2-100ml，灌装范围 20mg-1500mg，精度 $\pm 0.5\%$ - $\pm 5\%$ ；
 - ◎ 采用气流式分装，无机械磨损；
 - ◎ 采用行走梁结构，易清洁，无卫生死角；
 - ◎ 采用间歇式压塞结构，规格切换无需人工操作；
 - ◎ 规格件免工具快速更换；
 - ◎ 可配置在线 IPC 称重计量系统；
 - ◎ 可配置充氮功能（灌装前、灌装中、灌装后、压塞前）；
 - ◎ 可配置隔离器；
 - ◎ 遵循 21CFR part11、GAMP5，符合 EU cGMP 和 US FDA 等国际标准。
- + PDS4 series of full servo powder packer adopts walking beam structure, positioning filling at relative rest, intermittent pressing plug.
 - + Adopt full servo drive system, no mechanical drive;
 - + Suitable Specification 2-100 ml, Filling Range 20 mg-1500mg, Precision 0.5%- $\pm 5\%$;
 - + Air-flow sub-loading, no mechanical wear;
 - + Adopt walking beam structure, easy to clean, no sanitary dead angle;
 - + Intermittent plug structure is adopted. No manual operation is required for specification switching.
 - + Specification parts without rapid replacement of tools;
 - + Configurable online IPC weighing system;
 - + Can be equipped with nitrogen filling function (before filling, during filling, after filling, before pressing);
 - + Configurable isolator;
 - + follow 21 CFR part11、GAMP5, comply with international standards such as EU cGMP and US FDA.

YLX 系列口服液瓶洗烘灌封联动线

YLX Series Oral Liquid Compact Line For Washing, Sterilizing & Drying, Filling & Sealing



主要用途 / Main Application

本联动线组由 YQCL 系列立式超声波洗瓶机、KSZ 系列隧道式灭菌干燥机或远红外热风循环隧道式灭菌干燥机、YGZ 系列液体灌轧机三台单机组成，分为清洗、干燥灭菌、灌装轧盖三个工作区。每台单机可单机使用，也可联动生产，联动生产时可完成喷淋水、超声波清洗、机械手夹瓶、翻转瓶、冲水（瓶内、瓶外）、冲气（瓶内、瓶外）、预热、烘干灭菌、冷却、灌装、理盖、轧盖等二十多个工序。主要用于口服液瓶及其它小剂量溶液的生产。

This line is composed of YQCL series vertical ultrasonic washing machine, KSZ series sterilizing & drying tunnel, YGZ series filling & capping machine, divided into three working zone of washing, sterilizing & drying, filling & capping. Each machine can run independently, or be connected as a compact line. It could finish processing procedures such as: water spraying, ultrasonic washing, clamping & overturning vials by manipulator, water flushing(internal and external), air flushing(internal and external), pre-heating, drying & sterilizing, depyrogenation, cooling, filling, capping and so on. It is mainly used for production of oral liquid and other small volume solution in pharmaceutical factories.

性能优势 / Performance Advantage

- ◎ 立式超声波清洗机采用超声波清洗与水气独立分开压力喷射冲洗相结合方式，是目前国际最流行、可见异物检测效果最好的清洗设备。整个水气压力喷射清洗过程中，清洗介质均采用独立喷针，每一根喷针只固定一种清洗介质，完成一种冲洗工序，避免了清洗介质的交叉污染，更加符合新版 CMP 要求；
 - ◎ 热风循环隧道式灭菌干燥机采用热空气层流原理和热空气高温灭菌工艺对容器进行灭菌、去热原。远红外隧道式灭菌干燥机采用远红外石英管热辐射灭菌工艺，灭菌效果好；
 - ◎ 液体灌轧机采用大拨轮输瓶，灌针往复跟踪灌装，单刀旁置随动滚压式轧盖原理或三刀轧盖原理，还可选择防盗轧原理，其瓶子交接次数少，轧盖合格率高，适应性好；
 - ◎ 采用 PLC 控制人机界面的操作，能联动控制和单机操作，保证了整个机组的正常运行，其自动化程度高，操作人员少，劳动强度低。
- + Vertical ultrasonic washing machine adopts ultrasonic washing and alternant jetting water and airflow. It is the most popular washing equipment with highest clarity in the world. In whole washing process, three washing media adopt independent needles, each group of needles only flush one washing medium, avoids cross contamination, meets requirement of the new version of GMP.
 - + Hot air sterilizing & drying tunnel adopts the principle of laminar flow and hot air high temperature sterilization process, to sterilize and depyrogenate containers. Far infrared sterilizing & drying tunnel adopts thermal radiation sterilization technology through far infrared quartz tube. has good sterilizing effect.
 - + Filling & capping machine adopts large starwheel to infeed bottles, reciprocating tracking filling, and single knife capping method or three knives capping principal, and can adopt tamperproof capping principal. It has less bottle transferring, high capping qualified rate and good adaptability.
 - + It adopts PLC control with HMI operation, can control the whole line running or independent machine. It ensures normal running of the compact line with high automation, less operator and low labor intensity.

产品参数 / Product Parameters

型号 Model	适应规格 Suitable Sizes	生产能力 Output	电容量 (正常工作耗量) Power (Normal Consumption)	净质量 Net Weight	外形尺寸 Overall Dimensions
YLX5 ~ 25-C	5-25ml	6000-24000pcs/h	71.45kW(38kW)	7700kg	9400×2600×2340mm
YLX5 ~ 25-B	5-25ml	6000-18000pcs/h	64.5kW(38kW)	6000kg	8500×2410×1850mm
YLX5 ~ 25-A	5-25ml	6000-12000pcs/h	64.5kW(38kW)	6000kg	8500×2410×1850mm

YQCL 系列口服液瓶立式超声波清洗机 YQCL Series Vertical Ultrasonic Washing Machine



主要用途 / Main Application

主要用于制药厂口服液瓶的清洗，也可用于安瓿瓶、
抗生素瓶等药用玻璃容器的清洗。

Mainly used for washing of oral liquid bottles in pharmaceutical
factories; it also can be used for washing other glass containers such as
vials and ampoules.

性能优势 / Performance Advantage

本机为立式转鼓结构，采用机械手夹瓶、翻转和喷针作往复跟踪方式；利用超声波清洗和三水三气交替喷射冲洗的原理，对容器逐个清洗。其最大的特点是：循环水、压缩空气、注射用水均使用独立的喷针，插入瓶内冲洗；无交叉污染，水、气无压力损失，节约能源，且清洗效果好。同时还可目测到整个清洗过程，操作维护方便。

This machine uses vertical gyration structure. It adopts the principle of ultrasonic cleaning and alternant jetting water & airflow washing to clean the vials one by one. Circulation water, compressed air and WFI adopts independent needles which are inserted into vial to flush, no cross contamination, no water and air loss, energy saving, and good washing effect. It can observe whole washing process, and is convenient for operation and maintenance.

产品参数 / Product Parameters

型号 Model	适应规格 Suitable Sizes	生产能力 Output	耗水量 Water Consumption	耗气量 Air Consumption	电容量 Power	净质量 Net Weight	外形尺寸 Overall Dimension
YQCL28/5	5-10ml	14000-32000 pcs/h	0.2-0.3mPa 1.2m ³ /h	0.6MPa60m ³ /h	25kW	3000kg	2530×2850×1620 mm
YQCL28/4	5-20ml	10000-26000 pcs/h	0.2-0.3mPa 1.0m ³ /h	0.6MPa50m ³ /h	25kW	2900kg	2530×2850×1620 mm
YQCL28/3	5-30ml	8000-19000 pcs/h	0.2-0.3mPa 0.9m ³ /h	0.6MPa45m ³ /h	25kW	2800kg	2530×2850×1620 mm
YQCL20/4	5-20ml	8000-23000 pcs/h	0.2-0.3mPa 0.8m ³ /h	0.6MPa40m ³ /h	15.7kW	2400kg	2400×2200×1620 mm
YQCL20/3	5-30ml	6000-17000 pcs/h	0.2-0.3mPa 0.6m ³ /h	0.6MPa35m ³ /h	15.7kW	2200kg	2400×2400×1620 mm
YQCL20/2	5-30ml	6000-11000 pcs/h	0.2-0.3mPa 0.6m ³ /h	0.6MPa30m ³ /h	15.7kW	1900kg	2400×2400×1620 mm

KSZ 系列隧道式灭菌干燥机 KSZ Series Sterilizing & Drying Tunnel



主要用途 / Main Application

主要用于制药厂口服液瓶的烘干、灭菌。也可用于安瓿瓶、抗生素瓶等药用玻璃容器的烘干灭菌。

This machine is mainly used for sterilizing, drying and depyrogenation of oral liquid bottles and other glass containers such as vials and ampoules in pharmaceutical factories.

性能优势 / Performance Advantage

本机为整体隧道式结构，分为预热、高温灭菌、冷却三部分。采用热空气层流原理和热空气高温灭菌工艺对容器进行灭菌、去热原。采用负压密封、分流技术等核心专利技术，热分布均匀、去热原效果好。

The tunnel is divided into three zones: pre-heating zone, sterilizing zone and cooling zone. It adopts the principle of laminar flow and hot air high temperature sterilization process to realize containers' sterilization and depyrogenation; adopts core patent technologies such as negative pressure sealing and air flow dividing, and has good heat distribution and depyrogenation effect.

产品参数 / Product Parameters

型号 Model	灭菌原理 Principal	适应规格 Suitable Sizes	生产能力 Output	输送带 有效宽度 Valid Width of Conveyor Belt	电容量 Power	净质量 Net Weight	外形尺寸 Overall Dimension
KSZ620/43B	热风循环层流 Hot Air Laminar Flow	5-100ml	300-24000 pcs/h	600mm	54.3kW	3700kg	3680×1700×2400 mm
KSZ620/43-E	热风循环层流 Hot Air Laminar Flow	5-100ml	300-18000 pcs/h	600mm	47.55kW	3200kg	2760×1555×2410 mm
KSZ420/20	热风循环层流 Hot Air Laminar Flow	5-100mls	300-12000 pcs/h	400mm	24.88kW	2500kg	2360×1470×2350 mm

YGZ16/25 型口服液瓶灌轧机 YGZ16/25 Oral Liquid Bottle Filling & Filling Machine



主要用途 / Main Application

主要用于口服液瓶及其它小剂量溶液的灌装和轧盖。

It is mainly used for filling and capping of oral liquid bottles and other small volume solution in pharmaceutical factories.

性能优势 / Performance Advantage

本机采用一体式灌装、轧盖的方式，自动完成输瓶、进瓶、灌装、理盖、轧盖等工序。采用伺服电机驱动灌装，其灌装泵可根据用户的要求配置玻璃泵、金属泵、陶瓷泵或蠕动泵进行灌装。

This machine adopts filling and capping integration method. It can automatically finish procedures such as bottles loading, bottles conveying, filling, cap orienting, capping etc. Filling process is driven by servo motor. It can be equipped with glass pump, metal pump, ceramic pump or peristaltic pump for filling as per user's requests.

产品参数 / Product Parameters

型号 Model	适应规格 Suitable Sizes	生产能力 Output	灌装头数 No. Of Filling Heads	轧盖头数 No. of Capping Heads	电容量 Power	净质量 Net Weight	外形尺寸 Overall Dimension
YGZ16/25	5-25ml	16800-24000 pcs/h	16	25	4.175kW	1200kg	3100×2150×2000mm

YGZ15/16 型口服液瓶灌轧机 YGZ15/16 Oral Liquid Bottle Filling & Capping Machine



主要用途 / Main Application

主要用于口服液瓶及其它小剂量溶液的灌装和轧盖。

It is mainly used for filling and capping of oral liquid bottles and other small volume solution in pharmaceutical factories.

性能优势 / Performance Advantage

本机采用大拨轮进瓶、往复回转跟踪灌装与三刀轧盖的方式，自动完成输瓶、进瓶、灌装、理盖、轧盖等工序。其灌装形式可根据用户的要求配置玻璃泵、金属泵、陶瓷泵或蠕动泵进行灌装。

This machine adopts methods of big starwheel to infeed bottles, reciprocating and tracking to fill, and three-knives capping principal. It can automatically finish procedures such as bottles conveying, bottles loading, filling, cap orienting, capping etc. It can be equipped with glass pump, metal pump, ceramic pump or peristaltic pump for filling as per user's requirements.

产品参数 / Product Parameters

型号 Model	适应规格 Suitable Sizes	生产能力 Output	灌装头数 No. of Filling Heads	轧盖头数 No. of Capping Heads	电容量 Power	净质量 Net Weight	外形尺寸 Overall Dimension
YGZ15/16	5-25ml	13200-24000 pcs/h	15	16	3.425kW	1200kg	2550×1920×1780mm

PFS 系列预灌封生产系统 PFS Pre-Filling & Sealing Compact Line



主要用途 / Main Application

主要用于制药厂预充式注射器的拆包、灌装和加塞。

It is mainly used for unpacking, filling and stoppering of prefilled syringe in pharmaceutical factories.



性能优势 / Performance Advantage

- ◎ 本机采用伺服控制系统自动完成预充式注射器拆外包、撕膜、去内衬纸、换向、上下料、灌装、理塞、送塞、加塞、输出等工序。其机电一体化控制，运行稳定、自动化程度高；
- ◎ 用伺服系统与真空发生器相结合的方式自动将注射器从蜂窝托盘取出并放回；
- ◎ 采用伺服控制旋转陶瓷泵、金属泵灌装或者蠕动泵灌装，其灌装精度高，调整方便；
- ◎ 在灌针工位、胶塞输送工位、压塞杆加塞套工位配有检测系统，可以实现灌针位置、胶塞输送到位与否、压塞杆加塞套位置的在线检测；
- ◎ 胶塞在传输过程中胶塞与药液接触面与底轨无摩擦，而且始终在层流的保护下，避免产生微粒及被污染的风险；
- ◎ 主要传动部件均采用伺服驱动，且在设备台板下方，其定位精确，且避免对环境的污染；
- ◎ 本机为我公司集成和延伸的各种先进技术基础上，结合现代灌装原理，设计、开发的一种无菌预充注射器灌封机，可选配 ORABS 系统和灌装 CIP/SIP 系统等。本机高配时可完全符合 EUcGMP 和 USFDA 等国际标准；
- ◎ 可根据客户需求，配置无菌智能机器人，实现自动撕膜、去内衬纸、换向、灌装定位。机器人撕膜由预热、撕膜、去衬纸三部分自动连续完成；智能温控，避免过热产生废气而污染产品和洁净区；四边预热、无尘撕膜，消除机械撕膜带来的颗粒污染；平行去衬纸，防止衬纸上颗粒掉落污染产品。
- + It adopts servo control system to finish debuggng, delidding, delining, direction reversing, loading and unloading, filling, stopper feeding, stopper plugging, exiting and other procedures, with electromechanical integration control, stable running and high automation level.
- + It adopts servo system combined with vacuum generator to take out syringes from nest and return back.
- + It adopts servo system to control ceramic pump, metal pump or metal pump for filling, with high filling precision and convenient adjustment.
- + Equipped with detection system in filling needle station, stopper conveying station and stoppering plunger rod and stopper sleeve station, possible to realize on-line detection of filling needle position, stopper conveying position status, stoppering plunger in stopper sleeve.
- + During stopper conveying there is no friction between stoppers and liquid, as well as between stopper and bottom rail, and it is always under LAF protection, to avoid particle generation and contamination risk.
- + Main transmission parts adopt servo drive which are all under the machine frame, with accurate orientation and avoiding environmental pollution.
- + This is a kind of sterile prefilled syringe filling machine, designed and developed by our company on the basis of all advanced technologies and combined with modern filling principle, possible to be equipped with ORABS system and CIP/SIP system for filling as option. It can meet international standards such as EU cGMP and USFDA.
- + It can be equipped with intelligent robot as per user's requirements, to realize automatic delidding and delining, direction reversing and positioning to fill. Film tearing of robot consists of preheat, delidding and delining, realizing automatically and continuously. Intelligent temperature control can avoid waste gas raised by overheat to avoid contamination of product and clean area. Four-edges preheat and dust-free delidding can eliminate particle pollution by mechanic delining. Parallel delining can avoid particle dropping from the paper.


产品参数 / Product Parameters

型号 Model	适应规格 Suitable Sizes	最大 生产能力 Max. Output	加塞、灌装头数 No. of Topping, Filling Heads	锁口 头数 No. of Ocking Haeds	电容量 Power	净质量 Net Weight	外形尺寸 Overall Dimension
PFS2	1-20ml	3000pcs/h (1mL)	2	2	7.5kW	3000kg	4155×1210×1900mm
PFS5	1-20ml	8000pcs/h (1mL)	5	5	11kW	3000kg	4155×1210×1900mm
PFS10	1-20ml	15000pcs/h (1mL)	10	10	16kW	3000kg	4155×1210×1900mm
PFSR2	1-20ml	3000pcs/h (1mL)	2	2	12kW	3000kg	3485×1430×1900mm
PFSR5	1-20ml	8000pcs/h (1mL)	5	5	15kW	3000kg	3485×1430×1900mm
PFSR10	1-20ml	15000pcs/h (1mL)	10	10	18kW	3000kg	3485×1430×1900mm

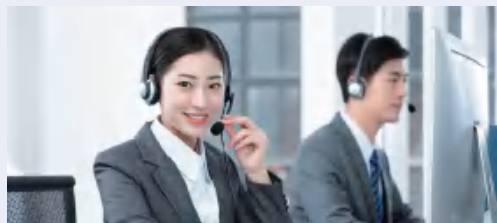


服务理念

400-9988-900



秉承“一切为客户着想，为一切客户着想，为客户着想一切”的理念，以“为客户创造价值”为己任，楚天专注于打造一流的研发、设计、销售、制造、服务团队及服务管理体系，为客户提供高效、优质的产品与服务。



项目规划支持

楚天拥有系列专业医药设计院、产品研究院，一批行业资深科研技术人员，国家级无菌制药工艺的验证专家、教授等，为客户的项目提供科学、有效的技术规划支持。



过程保障服务

楚天推出的医药装备整体解决方案，实现药品生产过程的全自动化、无菌化，智能检测、分选，以及计算机验证保障，生产出让市场“放心”的产品。



走进园区服务

楚天作为设备供应商，不仅仅将行业法规标准融入到产品设计、制造中，还让法规标准以讲座、交流的形式走进园区，与药企的工艺、生产形成互动与融合。



设备管理咨询服务

楚天致力于满足客户效益最大化需求，提供一揽子的设备管理模式，协同药厂实现投入最小化，产出最大化。

坚持“以客户为中心”，以匠人之心打造极致服务体验，为客户创造更多价值

34 全国 34 个省（市）

365 全年 365 天

7x24 7X24 小时服务时间

我们随时待命为客户单位设备正常运行保驾护航

- + 现场安装、调试、验收
- + 设备工艺、操作、维护等相关培训
- + 周期性的定期上门维护与回访
- + 设备各部件性能的检测与保养
- + 备品备件的及时供应
- + 产品技术升级与技术二次开发
- + 设备大修



Service Concept

400-9988-900



Adhering to concept of “all for customers, for all customers” , and with the mission of “creating value for customers” , TRUKING focuses on building first-class R&D, design, sales, manufacturing, service teams and service management system to offer high-efficient and high-quality products and services for the customers.



◎ Project Planning Support

TRUKING has a series of professional medical and pharmaceutical design institutes, product research institutes, a group of senior scientific research and technical personnel, national-level aseptic pharmaceutical process verification experts, professors, etc., to provide scientific and effective technical planning support for customers' projects.

◎ Service In The Park

As an equipment supplier, TRUKING not only integrates industrial regulations and standards into product design and manufacturing, but also introduces the industrial regulations and standards into Truking industrial park in the form of lectures and exchanges to interact and integrate with the technology and production of pharmaceutical enterprises.

◎ Process Assurance Service

TRUKING launched the overall solution for medical & pharmaceutical equipment realizing the full automation and aseptic production process, intelligent detection and sorting of the drug, as well as computer verification assurance so as to produce assured products for market.

◎ Equipment Management Consultation Service

TRUKING aims to satisfy the maximum benefited demands of the customer and to provide a package of equipment management services to realize minimization investment and maximization production output together with pharmaceutical factories.

◎ Adhere to the philosophy of "customer-centric", TRUKING creates the extraordinary service experience with the spirit of the craftsman, to create more value for customers.

◎ We are always ready to escort the normal operation of the customer's equipment.

- + Onsite equipment installation, commissioning, acceptance
- + Training for equipment process, operation and maintenance
- + Periodic door-to-door maintenance and return visit
- + Performance test and maintenance for machinery parts
- + Timely supply of spare parts
- + Product technology upgrading and secondary development
- + Equipment overhaul



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May 2020 Edition